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10/570,947

03/07/2006

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EXAMINER

PHAN, HAU VAN

ART UNIT

PAPER NUMBER

3618

MAIL DATE

DELIVERY MODE

07/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|----------------------------------------|--|
| Office Action Summary | Application No. 10/570,947 | Applicant(s) MIZUTANI ET AL. | |
| | Examiner Hau V. Phan | Art Unit 3618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-19 is/are rejected.
- 7) ☒ Claim(s) 10-12 and 20-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9, 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hewko et al. (5,087,229) in view of Tanahashi (4,650,211).

Hewko et al. in figures 1-3, disclose a wheel supporting apparatus comprising an elastic member (not number, see figure 2) attached to a load member provided in a wheel of a wheel unit (10) and placed to allow vibrations of the wheel unit and vibrations of the load member to dampen each other. Hewko et al. also disclose a suspension arm (32) having one end connected to the elastic member and the other end fixed to a vehicle body pivotably in a front-back direction of the vehicle body. Hewko et al. also disclose a rotatably supporting member (16) connected to the suspension arm and the elastic member to rotatably support the wheel. Hewko fail to show the suspension arm pivotably in a top-bottom direction.

Tanahashi in figure 6, teaches a vehicle suspension comprising a suspension arm (5) having one end connected to a bolt (19) and the other end fixed to a vehicle body pivotably in top-bottom direction of the vehicle body. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the

Art Unit: 3618

suspension arm of Hewko et al. with the vehicle suspension having a suspension arm pivotable in a top-bottom direction as taught by Tanahashi in order to improve a rideability when turning of the vehicle.

Regarding claim 2, Hewko et al. disclose the load member, which is an in-wheel motor including: a motor (not number) generating motive power; a motor output shaft (108) connected to the wheel via a constant velocity joint to allow the motive power generated by the motor to be transmitted to the wheel and a case (44) housing the motor, and the elastic member is attached to the case (see figure 3).

Regarding claim 3, Hewko et al. disclose the motor output shaft, which is comprised of a first output shaft (114) connected to motor and a second output shaft (108) having one end fitted into the first output shaft and the other end connected to the constant velocity joint.

Regarding claim 4, Hewko et al. disclose the load member, which is a weight provided to the wheel without connected to the wheel.

Regarding claim 5, Tanahashi teaches the suspension arm, which is comprised of an upper arm (4) and a lower arm (5) and an elastic member (15) is connected to at least one of the upper arm and the lower arm.

Regarding claims 6, 13, Tanahashi teaches the elastic member, which is comprised of a pair of elastic members, one of the pair of elastic members is connected to the upper arm, and the other of the pair of elastic members is connected to the lower arm.

Art Unit: 3618

Regarding claim 7, Tanahashi teaches the pair of elastic members when in combination with Hewko et al., which is connected to the load member in the top-bottom direction of the vehicle body, and the upper arm and the lower arm are connected to the pair of elastic members in the top-bottom direction of the vehicle body.

Regarding claims 8, 14, Tanahashi teaches the pair of elastic members when in combination with Hewko et al., which is comprised of a pair of front elastic members connected to the upper arm and the lower arm and attached to the load member in the top-bottom direction of the vehicle body and a pair of rear elastic members connected to the upper arm and the lower arm and attached to the load member in the top-bottom direction of the vehicle body, and the pair of front elastic members and the pair of rear elastic members are placed in a front-rear direction of the vehicle body.

Regarding claims 9, 16, Tanahashi teaches the pair of front elastic members and the pair of rear elastic members are each a rubber mount (see figure 9).

Regarding claim 15, Tanahashi teaches the upper elastic member and the lower elastic member, which are each comprised of at least one elastic body.

Regarding claim 17, Tanahashi teaches the upper elastic member and the lower elastic member, which are each comprised of at least one first elastic body and a second elastic body different from the first elastic body.

Regarding claim 18, Tanahashi teaches at least one first elastic body, which is each a rubber mount, and said second elastic body is a spring.

Regarding claim 19, Tanahashi teaches at least one first elastic body, which is each a spring, and the second elastic body is a rubber mount.

Allowable Subject Matter

3. Claims 10-12 and 20-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau V. Phan whose telephone number is 571-272-6696. The examiner can normally be reached on 7:30AM-4:00PM.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hau V Phan/

Application/Control Number: 10/570,947

Page 6

Art Unit: 3618

Primary Examiner, Art Unit 3618